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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,683	05/24/2006	Kadosa Hevesi	339547US99PCT	2141
22850	7590	12/22/2010		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER XU, LING X	
			ART UNIT 1784	PAPER NUMBER
			NOTIFICATION DATE 12/22/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/564,683

**Applicant(s)**

HEVESI, KADOSA

**Examiner**

Ling Xu

**Art Unit**

1784

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 18-26 and 28-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 18-26 and 28-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-840)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 18-26, and 29-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Boire et al. (US 6,045,890).

Boire discloses a transparent substrate coated with a stack of layers. The stack of layers comprises  $n$  functional layers having reflection properties in the infrared, in solar radiation or in both, and  $(n+1)$  coatings. The coatings comprise one or more layers and at least one of which is made of a dielectric material. The functional layers and coatings are alternating so that each functional layer is placed between two coatings (page 2, lines 60-67). Under each functional layer, the dielectric layer can be a single layer or a plurality of superimposed layers (col. 5, lines 50-65). Accordingly, each functional layer can have a single dielectric layer under the functional layer. Each functional layer can also have a metal layer such as Nb above the functional layer (Table 1). For example, the first function layer can have a single dielectric layer, which is under the first function layer and above the substrate, and a first metal layer, which is above the first functional layer.

Boire also discloses that at least one absorbent layer forms part of the coating placed under the functional layer (page 3, lines 1-5). The absorbent layer can be made from metallic type absorbent material such as Ni, Cr, Nb, Sn, Ti, (col. 6, lines 5-15 and 50-60). The absorbent layer can be (col. 5, lines 40-60) placed directly in contact with the functional layer, under it (between the first dielectric layer and the first functional layer) or on top of it (between the first functional layer and the second functional layer, and as part of the intermediate layer) (page 6, lines 65-67).

Boire further discloses that the thickness of the functional layer such as Ag is about 8-12nm. The total thickness of the Ag layers is about 16-24 nm when there are two Ag layers in the stack. The absorbent layer can have a thickness of 2-5 nm (col. 6, lines 5-15). The coated substrate can be used in a glazing assembly such as a double-glazing unit substrate (col. 9, lines 1-15).

Accordingly, Boire discloses the stack of coating comprising the same structure and materials as claimed, the same coating would also have the same properties as recited in claims 1, 18-26, 29-32, 34-35, 40 and 42. More specifically, Boire discloses that the light transmission value of the coated glass is from 50-85% and negative value of  $a^*$  and  $b^*$  in external reflection (col. 9, lines 15-35).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boire et al.

As stated above, Boire discloses the same coated substrate as recited in claim 1. Boire discloses a transparent substrate coated with a stack of layers. The stack of layers comprises  $n$  functional layers having reflection properties in the infrared, in solar radiation or in both, and  $(n+1)$  coatings.

Boire also discloses that  $n$  is greater than 1 (i.e.  $n$  can be 1, 2, or more). If  $n$  is 3, the stack of layers comprises at least three infrared reflective layers. The middle (or the second) infrared reflective layer and the two dielectric layers sandwiched the middle infrared reflective layer can be considered as the intermediate layer. Boire meets the limitations of claim 28.

In the alternative, it would have been obvious to one of ordinary skill in the art to make the stack of coating layers disclosed by Boire to have more than 3 functional layers in order to provide more effective optical properties for the stack of coating layers. When  $n$  is greater than 3, the stack of layers comprises at least three infrared reflective layers. The second infrared reflective layer and the two dielectric layers sandwiched the second infrared reflective layer can be considered as the intermediate layer.

***Response to Arguments***

3. Applicant's arguments filed on 11/23/2010 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu  
Primary Examiner  
Art Unit 1794

/Ling Xu/  
Primary Examiner, Art Unit 1784  
December 15, 2010